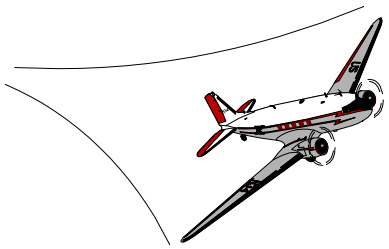
SPECIAL AIRWORTHINESS INFORMATION BULLETIN



Aircraft Certification Service
Washington, DC

U.S. Department of Transportation

Federal Aviation Administration

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www.faa.gov/certification/aircraft

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts you, owners and operators of **General Electric Aircraft Engines (GE) CF34-1A, -3A, -3A1, -3A2, -3B and –3B1** turbofan engines, and the foreign Civil Aviation Authorities (CAAs) of a possible engine fuel control drive shaft failure that could result in a loss of engine thrust. These engines are installed on, but not limited to Bombardier Business Jet Models CL-600-2A12, CL-600-2B16, and Regional Jet Model CL-600-2B19 aircraft.

Background

We are aware of six events involving GE CF34-3 series engines where the fuel pump control drive shaft has disengaged from the engine fuel control. This resulted in a low or intermittent engine core speed input to the fuel control for the engine operating schedules. The loss of the speed input results in a momentary transient overspeed, engine rollback, and a loss of thrust control of the affected engine. The control drive shaft disengages from the mating splines in the main fuel control (MFC) because of excessive wear on the MFC splines. The drive shaft is wearing through the MFC spline teeth. The wear rate is a function of the lubricity of the jet fuel being burned (the use of low lubricity fuel correlates with higher wear rates). Field event and inspection data indicate the problem is common among African, Asian, and European operators.

The manufacturer and the FAA have defined a control program that specifies repetitive, visual inspections of the main fuel pump control drive shaft and mating splines in the MFC (offset drive assembly). The recommendation includes an inspection of the main fuel pump secondary drive shaft, which connects with the opposite end of the control drive shaft.

Because the wear rate varies as a function of fuel lubricity, the recommended inspection thresholds and reinspection intervals vary for different regions of the world. In general, the initial inspection threshold and repetitive inspection interval for operations in Asia is 4,000 hours. The inspection threshold/interval for operations in Europe is 10,000 hours. The compliance recommendation for North American operations is to inspect at engine or component shop visits.

GE Aircraft Engine (GEAE) Service Bulletins CF34-AL S/B 73-A0035 and CF34-BJ S/B 73-A0050 provide specific compliance recommendations and inspection instructions.

Recommendation

We are informing GE CF34 operators, repair stations, and foreign regulatory agencies of the inspection recommendations defined by GEAE Service Bulletins CF34-AL S/B 73-A0035 and CF34-BJ S/B 73-A005 and recommend compliance.

For Further Information Contact

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